

IN THE SUBSTITUTE SPECIFICATION:

Page 2, amend the paragraph starting at line 1 and ending at line 4 as follows:

-- These electromechanical devices ~~consists~~ consist of fuses, relays, breakers, breakers with thermal or magnetical protection, contactors, voltmeters, ammeters and relevant similar units. ~~they~~ They have normally great over-all dimensions and weights, and produce electromagnetic noise with the closing/opening of contacts.--.

Page 3, amend the paragraph starting at line 8 and ending at line 9 as follows:

-- With respect to actual electromechanical devices, the DSC system here described offers the ~~followings~~ following advantages:--.

Page 4, amend the paragraph starting at line 2 and ending at line 6 as follows:

-- With ~~others~~ other advantages, the DSC system, based on a solid state power switch, can be connected to an external electronic system that can monitor any physical parameter like current, voltage, temperature, and circuit and load condition. The monitored physical parameters can be recorded to obtain a history of activations or malfunctions, or to trigger an immediate warning alarm.--.

Page 4, amend the paragraph starting at line 14 and ending at line 16 as follows:

--The DSC system proposed has been designed to be modular, that is to say composed from one or more DSC modules ~~(10)~~, also connectable in a parallel mode. Each DSC module

can be programmed for different currents ranging from 10 to 100 Amperes.--.

Page 5, amend the paragraph starting at line 1 and ending at line 2 as follows:

--The DSC module can be easily installed instead of mechanical fuses because ~~it's~~ its mechanical dimensions are close to the standard for electrical cabinet installation.--.

Page 5, amend the paragraphs starting at line 7 and ending at line 12 as follows:

--Over the allowable range of programmed current ~~programmed~~, the DSC module halts the current and protects the load from a short-circuit or higher current, or from out of range temperatures.

In the second mode the DSC module is ~~remote~~ remotely controlled and the electronic circuit board contains a microcontroller with a memory. All of the characteristics of the manual mode are maintained but the controller memory can be programmed by using a dedicated program with parameters for a specific load like:--.

Page 6, amend the paragraphs starting at line 4 and ending at line 10 as follows:

--This solution is applicable in electrical installation on board ~~little~~ small and medium range ships, where the distribution of a load and the separation of lines is imposed by navigation rules, above all, for the safety of those on board.

The DSC system comprises the architecture design advantages of an ~~on-board~~ onboard electrical installation with regard to weight, overall dimensions and reduced wiring complexity.

The DSC offers these design advantages in an electrical installation where the electrical device of the ship is connected by a bus to a central operating unit.--.

Page 7, amend the paragraph starting at line 10 and ending at line 12 as follows:

--Referring to the drawings in particular, an example of a DSC module (10) is represented in the drawings of Fig.1 and Fig. 2. The DSC module consists of two copper supports (11) and (12), a solid state switch (13), a printed circuit board (14) and an optional heat dissipator (15).

Page 7, amend the paragraphs starting at line 15 and ending at line 18 as follows:

The solid state switch (13), ~~yet known~~ known, is soldered on the copper support (11) and is connectable to the positive voltage bar (16).

The copper support (11) can be in contact with the optional heat dissipator (15) and is connected with the circuit electronic board (14) ~~within~~ with the control electronics.--.

Pages 8 and 9, amend the paragraphs starting on page 8 at line 11 and ending on page 9 at line 1 as follows:

--Instead of using a traditional heat dissipator (15), the copper supports (11), (12) and the voltage bar (16) are shaped and dimensioned so they alone may be used to dissipate heat. The working of the DSC system is normally controlled by a microcontroller, but it may also be used in the first mode if manual operation is preferred.

When a ~~level on the~~ closing signal is activated, the DSC module switches and closes the circuit on the load. A return status signal is analyzed to know if the correct operation has been processed. Another analog signal can be used to monitor and measure the current flowing in a load.

Any combination of the previous signals can be used by the software to identify the working status of the DSC module and then alert the operator of a particular malfunction like current limiting, current short-circuit, increasing of temperature, load not connected, load not correct, undervoltage, overvoltage and over current.